

Appl. No. : 09/311,329
Filed : May 11, 1999

REMARKS

In response to the Office Action mailed July 12, 2004, Applicant respectfully requests the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following comments. Claims 3, 4, 6-8, 10-17, 19-24, 26-27, 29-30, 33-34, 37, 49, 85-86, and 90-91 are canceled, Claims 1, 2, 5, 9, 18, 25, 28, 31-32, 36, and 87-89 are presented for further examination.

Discussion of the Rejection of Claims under 35 U.S.C. § 112, Second Paragraph

In the Office Action, the Examiner rejected Claims 2, 18-31, 33, 46, and 49 under 35 U.S.C. § 112 second paragraph as being indefinite. Because Claim 46 was Withdrawn and based on the context of the rejection of Claim 46, Applicant believes "46" is a typographical error and the examiner meant to reject Claim 36, and this Response is written accordingly. If this was not the case, Applicant requests the Examiner to point out the reasoning of the Withdrawn Claim 46 rejection. Although the Applicant traverses this rejection, the foregoing amendments to independent Claims 2, 18, 25, 28, 31, and 36 address the objected to language. Claims 19-24, 26-27, 29-30, 33, and 49 are canceled.

Claim 2 has been amended to provide the appropriate antecedent basis and require that the "said plurality of analyte-specific signal elements and said wobble groove are disposed to produce a signal readable by a single optical pickup of the optical disc reader."

Claim 18 has been amended to indicate that "said plurality of analyte-specific signal elements are disposed relative to said wobble groove such that a signal from an analyte-specific signal element of said plurality of analyte-specific signal elements is detectable as an amplitude variation in an HF signal generated by tracking said wobble groove with a laser from an optical disc reader reading said optical disc."

Claims 25, 28 and 31 have been amended to remove the "laser-proximal" language and clarify the positional relationship of the reflective surface, substrate, and wobble groove (Claim 25), the positional relationship of the plurality of analyte-specific signal elements, substrate, and wobble groove (Claim 28), and the positional relationship of the light transmissible coating, the reflective surface and the plurality of analyte-specific signal elements (Claim 31).

Claim 36 has been amended to provide appropriate antecedent basis.

Appl. No. : 09/311,329
Filed : May 11, 1999

Accordingly, the Applicant respectfully submits that indefinite rejections are moot, requests the rejections under 35 U.S.C. § 112 second paragraph be withdrawn and presents the amended claims for further examination.

Discussion of the Rejection of Claims under 35 U.S.C. § 102(b)

In the Office Action, the Examiner rejected Claims 1-31 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,508,985 issued to Fairchild et al (hereafter "Fairchild"). Applicant traverses these rejections. Claims 3, 4, 6-8, 10-17, 19-24, 26-27, and 29-30 are cancelled by this paper.

Applicant respectfully submits that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. *See* M.P.E.P. § 2131. Claim 1, amended herein, includes "a plurality of analyte-specific signal elements disposed readably with said wobble groove," an element which is not disclosed in Fairchild. Although Fairchild discloses an optical disk with a wobble groove, Fairchild does not disclose, teach or suggest disposing analyte-specific signal elements readably with the wobble groove. Instead, Fairchild discloses technology for reading synch marks that are encoded on a wobble groove by a physical configuration of the wobble groove itself using an "illegal length" ($1\frac{1}{2}T$) of biphasic data instead of the "legal" lengths ($1/2T$ and T). *See* Fairchild col. 3, lines 52-59. That is, the synch marks are physically part of the wobble groove. Accordingly, Applicant respectfully submits that DeCusatis does not teach or suggest each and every element of Claim 1. Therefore, for at least these reasons, Applicant respectfully submits Claim 1 is not anticipated by Fairchild and is in condition for allowance.

Claims 2, 9, 18, 21, 25, 28, and 31 are dependent directly or indirectly on the above-discussed Claim 1. Accordingly, Applicant respectfully submits that amended Claims 2, 9, 18, 21, 25, 28 and 31 are also in condition for allowance for at least the same reasons.

Discussion of the Rejection of Claims under 35 U.S.C. § 102(e)

In the Office Action, the Examiner rejected Claims 1-4, 6-9, 21, 25-31, and 85-89 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,922,617 issued to Wang et al. (hereafter "Wang"). Applicant traverses these rejections. Claims 3-4, 6-8, 21, 26-27, 29-30 and 85-86 are canceled by this paper.

Appl. No. : **09/311,329**
Filed : **May 11, 1999**

Claim 1, amended herein, is only anticipated by Wang if each and every element as set forth in the claim is described, either expressly or inherently, in Wang. Claim 1 requires “a first reflective surface comprising a wobble groove.” As stated by the Examiner, Wang does not teach a “wobble groove.” Accordingly, Applicant respectfully submits that Wang does not describe each and every element of Claim 1. Therefore, for at least these reasons, Applicant respectfully submits Claim 1 is not anticipated by Wang and is in condition for allowance.

Claims 2, 9, 21, 25, 28, 31, and 87-89 are dependent directly or indirectly on the above-discussed Claim 1. Accordingly, Applicant respectfully submits that amended Claims 2, 9, 18, 21, 25 and 28 are also in condition for allowance for at least the same reasons.

Additionally, upon careful review of Wang, Applicant respectfully suggests that Wang does not teach or suggest all the elements of Claim 31, amended herein, requiring “a light transmissible coating applied to said first reflective surface opposite of said first solid substrate,” or “wherein said plurality of analyte-specific signal elements are disposed upon said light transmissible coating on the side of the light transmissible coating opposite to said first reflective surface.” Wang discloses an optical disk having beads positioned in a predetermined order or location bound to a solid substrate by magnetic needles (Fig. 2A), vacuum channels (Fig. 2B), or in cylindrical (Fig. 2C) or rounded (Fig. 2D) pits in the substrate, but never discloses or suggests that the beads are disposed upon a light transmissible coating. Accordingly, Applicant respectfully submits that Wang does not describe each and every element of Claim 31. Therefore, for at least these reasons, Applicant respectfully submits Claim 31 is not anticipated by Wang and is in condition for allowance.

Discussion of the Claim Rejections Under 35 U.S.C. § 103

Claims 32-34, 36-37, and 49 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Fairchild in view of U.S. Patent No. 5,917,798 issued to Horimai et al. (hereafter “Horumai”). Claims 32-34, 36-37, and 49 were also rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of Horimai. Applicant traverses the rejections of these claims. Claims 32-34, 37, and 49 have been canceled.

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. See M.P.E.P § 2143.03. Claim 36, amended herein, requires a “laser-refracting cover *attached to* said optical disc ...,” an element which is not

Appl. No. : 09/311,329
Filed : May 11, 1999

disclosed, taught or suggested in Horimai, Wang or Fairchild. Accordingly, Applicant respectfully submits that the cited references in any combination of Horimai, Wang, and Fairchild do not render Claim 36 obvious. Therefore, for at least this reason, Applicant respectfully submits Claim 36 is in condition for allowance.

Claims 10-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang et al. in view of Fairchild. Claims 10-17, 19-20, and 21-24 have been canceled. Applicant traverses the rejections of these claims.

Upon careful review of the cited art, Applicant respectfully asserts that Fairchild and Wang do not suggest, teach, or disclose the limitations of Claim 18, amended herein. For example, Claim 18 includes the limitation that “*analyte-specific signal elements are disposed with said wobble groove*” and “such that a signal from an *analyte-specific signal element of said plurality of analyte-specific signal elements is detectable as an amplitude variation in an HF signal* generated by tracking said wobble groove.” Instead, Fairchild discloses a wobble groove encoded with a synch mark, which is physical characteristic of the wobble groove itself and not any type of element disposed with a wobble groove (See, Fairchild col. 3, lines 16-24 and 52-59). Wang does not disclose using a wobble groove for any purpose.

Even assuming, solely for the purposes of discussion, that the cited references do teach the claimed limitations, in order to establish a *prima facie* showing of obviousness, the Patent and Trademark Office has the burden to provide a motivation, teaching, or suggestion to create the claimed invention. See, e.g., *In re Fine*, 5 U.S.P.Q.2d 1597 (Fed. Cir. 1988). Moreover, the evidence to prove the motivation, teaching, or suggestion must be clear and particular and can flow from one of only three sources: (1) the prior art references themselves, (2) the knowledge of one of ordinary skill in the art, or (3) the nature of the problem to be solved. See, *In re Dembiczak*, 175 F.3d 994, 999 (Fed Cir. 1999).

Applicant respectfully submits that the Office Action has not shown a clear and particular motivation, teaching, or suggestion in the referenced art. The Fairchild or Wang references do not disclose a motivation to modify or combine that would have made obvious the claimed invention of the present application.

The Office Action also does not show any evidence to prove a motivation, teaching or suggestion to modify Wang that flows from the knowledge of one of ordinary skill in the art. The mere fact that references can be modified does not render the resultant combination obvious

Appl. No. : 09/311,329
Filed : May 11, 1999

unless the prior art also suggests the desirability of the modification. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, no suggestion or motivation occurs. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). In the Office Action, there is no indication of a suggestion by the knowledge of one of ordinary skill in the art showing the desirability to modify Wang with Fairchild. Assuming, for the sake of argument, Wang was modified with the wobble groove of Wang, disposing “analyte-specific signal elements with said wobble groove” renders the scheme of separate coded addressable sections and the disclosed structures for holding the beads as shown in Wang Figs. 2A - 2D inoperative for their intended purpose.

In addition, the Office Action does not show that a motivation, teaching or suggestion to combine the referenced art flows from the nature of the problem to be solved. In Wang, the nature of the problem to be solved was the need to provide a device for rapid screening assay devices for a large numbers of components, where the device includes a solid support upon which to place bound components in conjunction with address encoders in a predetermined registry (Wang Col. 2). In Fairchild, the nature of the problem to be solved was the need to detect and process synchronization marks from a wobble groove (Fairchild Abstract). However, the nature of the problem to be solved by the claimed invention, for example, permit a standard optical disc reader/writer to acquire signals from nonoperational features (e.g., analyte-specific signal elements) concurrently and discriminably with signals generated by operational features of the disc (e.g., a wobble groove) is significantly different. Combining the art in Wang and Fairchild appears to result in an inoperable system for solving the problem in the Applicant’s invention. The Office Action does not identify where in the prior art one would find such a motivation, teaching or suggestion to combine, that flows from the nature of the problems to be solved to create the invention of Claim 18.

Furthermore, Applicant respectfully traverses the rejection based upon the knowledge of one of ordinary skill in the art. According to the Manual of Patent Examining Procedure, if an applicant traverses a rejection based upon the knowledge of one of ordinary skill in the art, the Examiner should cite a reference in support of his or her position. M.P.E.P. § 2144.03. Thus, to the extent that the Office Action relies upon the knowledge of one of ordinary skill in the art as a

Appl. No. : **09/311,329**
Filed : **May 11, 1999**

basis for the rejections, Applicant respectfully requests the Examiner to provide a reference in support of his position.

Accordingly, Applicant respectfully submits that the combination of Wang and Fairchild does not render Claim 18 obvious. In addition, as Claim 18 depends directly from Claim 1, discussed above, Claim 18 is allowable for at least the same reason as Claim 1. Therefore, for at least these reasons, Applicant respectfully submits Claim 18 is in condition for allowance.

Claim 34 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of Horimai and in further view of Fairchild. Claim 34 is cancelled herein, rendering this rejection moot.

CONCLUSION

The applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims for patentability purposes pursuant to statutory sections 102, 103 and/or 112, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. In light of these amendments and remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested.

Any claim amendments which are not specifically discussed in the above remarks are not made for patentability purposes, and it is believed that the claims would satisfy the statutory requirements for patentability without the entry of such amendments. Rather, these amendments have only been made to increase claim readability, to improve grammar, and to reduce the time and effort required of those in the art to clearly understand the scope of the claim language. Furthermore, any new claims presented above are of course intended to avoid the prior art, but are not intended as replacements or substitutes of any cancelled claims. They are simply additional specific statements of inventive concepts described in the application as originally filed.

If the Examiner has any questions which may be answered by telephone, he is invited to call the undersigned directly.

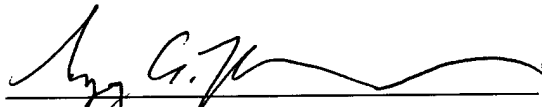
Appl. No. : 09/311,329
Filed : May 11, 1999

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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